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- each other at a plurality of connection points along where they are side-by-side;
- a closure device including a first guidewire lumen, a portion of the guidewire extending through the first guidewire lumen, the closure device having a sealing pad lumen, the sealing pad lumen having a lumen cross-sectional shape;
- a sealing pad deployable from the sealing pad lumen of the closure device, the sealing pad having a pad cross-sectional shape mirroring the lumen cross-sectional shape upon deployment in the percutaneous incision;
- a dilator including a second guidewire lumen, a portion of the guidewire extending through the second guidewire lumen, the dilator being configured to expand or dilate the percutaneous incision or tissue puncture;
- wherein the closure device and the dilator are operable to advance over the guidewire for use within the percutaneous incision without retracting the closure device and dilator from the proximal end of the guidewire.
- 10.** The tissue puncture closure device of claim **9**, wherein the closure device and the dilator are operable to advance over the guidewire sequentially for use within the percutaneous incision.
- 11.** The tissue puncture closure device of claim **9**, wherein the first guidewire portion extends through the first guidewire lumen and the second guidewire portion extends through the second guidewire lumen.

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- 12.** The tissue puncture closure device of claim **11**, wherein the first and second guidewire portions having different cross-sectional shapes.
- 13.** The tissue puncture closure device of claim **9**, wherein the guidewire includes an expandable anchor portion.
- 14.** The tissue puncture closure device of claim **9**, wherein the sealing pad lumen is arranged adjacent to the first guidewire lumen, the sealing pad being positioned within the sealing pad lumen.
- 15.** The tissue puncture closure device of claim **14**, wherein the second guidewire lumen is configured to have a closed state and an open state, wherein in the closed state the guidewire is retained within the dilator, and in the open state the guidewire is removable from the dilator prior to retracting the dilator from the proximal end of the guidewire.
- 16.** The tissue puncture closure assembly of claim **9**, wherein the plurality of connection points comprise a side-by-side connection point extending along where the first and second guidewire portions are side-by-side.
- 17.** The tissue puncture closure assembly of claim **9**, wherein the plurality of connection points are spaced apart along where the first and second guidewire portions are side-by-side.

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